

NWEA Assessment Item Illustrating 6.RP.A.1

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Domain: Ratios and Proportional Relationships

6.RP.A: Understand ratio concepts and use ratio reasoning to solve problems.

Calculator Availability: No

Use the information to complete the task.

Party Punch Recipe

5 quarts of fruit juice
3 quarts of soda pop
2 quarts of ice cream

Move a number to each line to make each statement true.

The ratio of quarts of fruit juice to quarts of ice cream is ____ : ____ .

The ratio of quarts of soda pop to quarts of party punch is ____ : ____ .

For every ____ quarts of ice cream, there are ____ quarts of soda pop.

1 2 3 4 5 6 7 8 9 10

Alignment: 6.RP.A.1: Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

Ratios and proportional relationships are both foundational for future study in mathematics and science and used frequently in everyday life. This item requires students to demonstrate their understanding of ratios and ratio language to describe the relationship between two quantities represented in different ways.

Coherence: Ratio concept development builds on the work of grade 5, in which students began to analyze patterns and relationships^{5.OA.B} and to solve problems involving multiplication and division of fractions.^{5.NF.B} Solving problems involving unit rate—in which students interpret the meaning of the equivalent terms *for every*, *for each*, *for each 1*, and *per*—prepares students for developing an understanding of proportional relationships^{7.RP.A, 7.G.A.1} and builds the foundation for the grade 8 work of linear functions and slope understanding.^{8.F.A/B}

Rigor: This item attends to conceptual understanding and application. Students must understand the concept of a ratio and use that knowledge to represent a ratio between two quantities. In this item, the conceptual component is the recall of the definition of ratio. This item requires an application of mathematics that is directly indicated in a real-world scenario.

Answer Key: There are multiple equivalent correct responses. One sample correct response is shown.

Use the information to complete the task.

Party Punch Recipe

5 quarts of fruit juice
3 quarts of soda pop
2 quarts of ice cream

Move a number to each line to make each statement true.

The ratio of quarts of fruit juice to quarts of ice cream is 5 : 2 .

The ratio of quarts of soda pop to quarts of party punch is 3 : 10 .

For every 2 quarts of ice cream, there are 3 quarts of soda pop.

1 2 3 4 5 6 7 8 9 10

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